



# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

Tatsuya ISHII

Title:

VARIABLE-GAIN DIGITAL FILTER

Appl. No.:

09/741,194

Filing Date: 12/21/2000

Examiner:

Unassigned

Art Unit:

2631

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# **INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR §1.56**

JUL 1 9 2002

**Technology Center 2600** 

Commissioner for Patents Washington, D.C. 20231

Sir:

Submitted herewith on a modified Form PTOSB/08B is a listing of document(s) known to Applicant in order to comply with Applicant's duty of disclosure pursuant to 37 C.F.R. § 1.56. A copy of the listed document(s) is being submitted to comply with the provisions of 37 C.F.R. §§ 1.97-1.98.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 C.F.R. § 1.56(b). Applicant does not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a prima facie prior art reference against the claims of the present application.





### **TIMING OF THE DISCLOSURE**

The instant Information Disclosure Statement is being filed before the mailing date of a first action under the provisions of 37 C.F.R. § 1.97(b)(3). In the alternative, the instant Information Disclosure Statement is being filed under the provisions of 37 C.F.R. § 1.97(c)(1).

### STATEMENT UNDER 37 C.F.R. § 1.97(e)

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The undersigned hereby states in accordance with 37 C.F.R. § 1.97(e)(1) that each item of information contained in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three (3) months prior to the filing of this Statement.

### **RELEVANCE OF EACH DOCUMENT**

The documents listed on the attached PTO/SB/08B were cited as being relevant during the prosecution of the corresponding Japanese application. A copy of an English language abstract of the listed documents, if available, is being provided. The absence of a translation or an English-language counterpart document does not relieve the PTO from its duty to consider this document (37 C.F.R. § 1.98 and M.P.E.P. § 609).

The Examiner in the corresponding Japanese patent application has commented as follows:

A. The invention according to Claim 1 of the present application could have been easily invented, by a person having ordinary knowledge in the technical field of th einention prior to the filing, based on the inventions described in the publications indicated below, which were distributed in Japan or abroad prior to the filing, and therefore cannot be patented, as per the stipulations of Article 29, Section 2 of the Patent Law.

### Description

1. Japanese Unexamined Patent Application Publication H11-220357

Remarks

The aforementioned Publication 1 describes a variable gain digital filter made by incorporating a gain adjustment circuit therein.

B. The specification and drawings of this application do not meet the conditions stipulated in Article 36, Sections 4 and 5 of the Patent Law in the point indicated below under a.

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### Description

a. The language of the detailed description of the invention is not clear.

(Paragraph (0008) of the detailed description of the invention in the specification of the present application states that "The inventive variable gain digital filter is made with a gain adjustment circuit comprising a first selector which selects the gain and a first multiplier which multiplies the output of said first selector by the input data, whereby said gain adjustment circuit is removed from the preliminary stage of the aforementioned filter and incorporated within said filter." However, to achieve a reduction in circuit scale, which is the purpose of the invention as per the present application, as shown in (Figure 1), the first multiplier which makes up the gain adjustment circuit incorporated within the filter needs to multiply the output of a first selector which selects the gain by a series of coefficients, but such a structure is not described. Furthermore, in the structure as quoted above, whereby "a first multiplier multiplies the output of a first selector by the input data", it is unclear how the aforementioned purpose of the invention as per the present application is achieved.

When making an amendment, note that by amending the sections indicated above, the invention described in Claim 1 will not be recognized as the invention described in the detailed description of the invention.)

C. The statement of patent claims in this application does not meet the conditions stipulated in Article 36, Section 6, Paragraph 2 of the Patent Law in the point indicated below under b.

#### Description

b. The constitution as described in the patent claims is not clear.







- (1. Claim 1 states that, "in a variable gain digital filter having a gain adjustment circuit in a preliminary stage of the digital filter, said gain adjustment circuit is removed from the preliminary stage of said filter and incorporated within said filter"; however, the statement quoted above, "variable gain digital filter having a gain adjustment circuit in the preliminary stage of the digital filter", and the statement "gain adjustment circuit is removed from the preliminary stage of said filter" do not structurally conform to each other and are unclear.
- 2. Claim 2 states that "the aforementioned first multiplier multiplies and outputs the gain signal output from the aforementioned first selector by a series of coefficients switched at fixed intervals and output from a second selector", JUL 1 9 2002 whereas Claim 1, which is cited in Claim 2, speaks of "a first multiplier which multiplies the output of a first selector by tachnology Center 2600 input data", so there are two different descriptions regarding the input of the first multiplier, which is unclear.
- 3. Claim 4 states that "each aforementioned selector 1 through 3 switches the output every  $(T/N \times 2 \text{ hours } (T: 1 \text{ time slot: n: order of filter)"; however, in the invention as per the present application, in order to perform a specific gain adjustment, it is necessary to switch the first selector with the timing at which the gain changes, so it is unclear if the gain adjustment as per the invention of the present application is carried out by switching the output every <math>(T/n) \times 2$  hours as in the structure quoted above.)

Regarding claims other than those indicated in this notice of reasons for rejection, at this time, no reasons for rejection have been discovered. If any reasons for rejection are newly discovered, a notice thereof will be issued.

Record of Prior Art Literature Search Results

Fields Searched

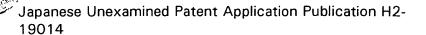
IPC 7<sup>TH</sup> Edition

H03H 17/00-17/08

H03G 5/00-11/08

Prior Art Literature

Japanese Unexamined Patent Application Publication H6-245300



This Record of Prior Art Literature Search Results does not constitute a reason for rejection.

Reference 1 listed above is in the same family of patents as U.S. Patent No.

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6,360,240 submitted herewith.

It is believed that the instant information disclosure statement is being filed prior to the mailing date of any Notice of Allowance or Final Office Action. However, if this information disclosure statement is filed after the mailing date of the Notice of Allowance or Final Office Action, then applicant(s) hereby request(s) and authorize(s) the PTO to charge the fee under 37 CFR 1.17(p) to Deposit Account No. 19-0741.

Applicant respectfully requests that any listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08B be returned in accordance with M.P.E.P. § 609.

Date July 11, 2002

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COPY OF PAPERS ORIGINALLY FILED

Technology Center 2600

Respectfully submitted,

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David A. Blumenthal Attorney for Applicant Registration No. 26,257





### NITED STATES PATENT AND TRADEMARK OFFICE

Attorney Docket No. 040373-0301

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Tatsuya ISHII

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**FILTER** 

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**CERTIFICATE OF MAILING** 

**Technology** Center 2600

Assistant Commissioner for Patents Washington, D.C. 20231

Assistant Commissioner:

I hereby certify that the following paper(s) and/or fee along with any attachments referred to or identified as being attached or enclosed are being deposited with the United States Postal Service as First Class Mail under 37 C.F.R. § 1.8(a) on the date of deposit shown below with sufficient postage and in an envelope addressed to the Assistant Commissioner for Patents, Washington D.C. 20231.

- Information Disclosure Statement 1.
- 2. Form PTO SB/08
- 3. Postcard

Respectfully submitted,

July 11, 2002

Date

# 44,740 David A. Blumenthal

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